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OCTOBER 1979

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METEOROLOGICAL DATA REPORT

19702A GSRS
Missile No. 212
Round No. B-54
30 October 1979

by

White Sands Meteorological Team

DTIC
ELECTE
MAR 27 1980
S D E

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19702A GSRS, Missile Number 212, Round Number B-54 are presented in tabular form.		

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INTRODUCTION

19702A GSRS _____, Missile Number 212 _____, Round Number B-54 _____, was launched from LC-33 _____, White Sands Missile Range (WSMR), New Mexico, at 0930 MST on 30 October 1979 _____. The scheduled launch time was 0930 MST _____.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team. Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), Wind direction and speed, and cloud cover were made at the LC-33 _____ Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

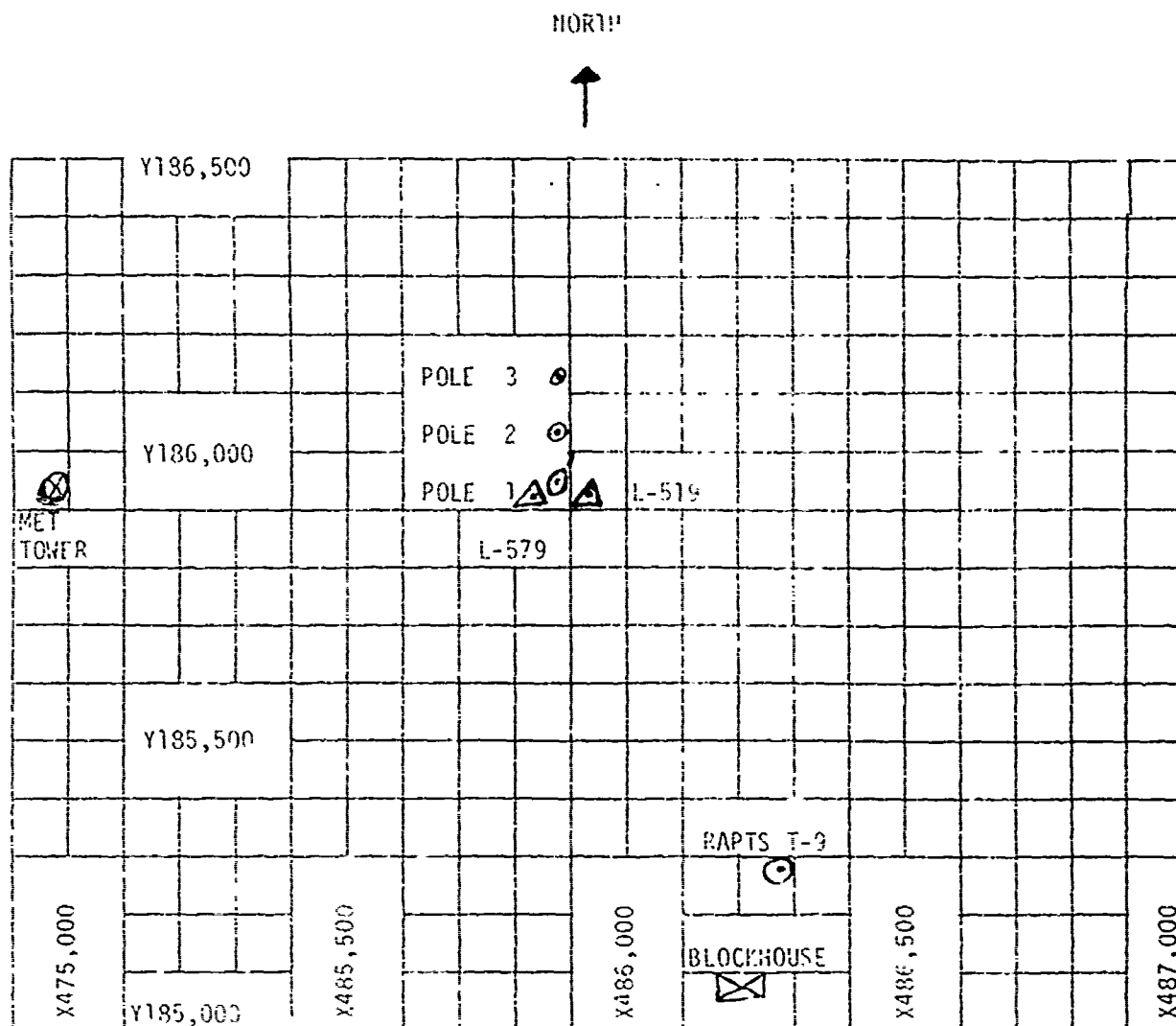
SITE AND ALTITUDE

LC-33 2Km
Nick 2Km

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 78,500 _____ feet in 500-foot increments.

SITE AND TIME

SMR 0930 MST



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 33.7 ft.
 - (b) Pole #2 - 53.0 ft.
 - (c) Pole #3 - 83.6 ft.
3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

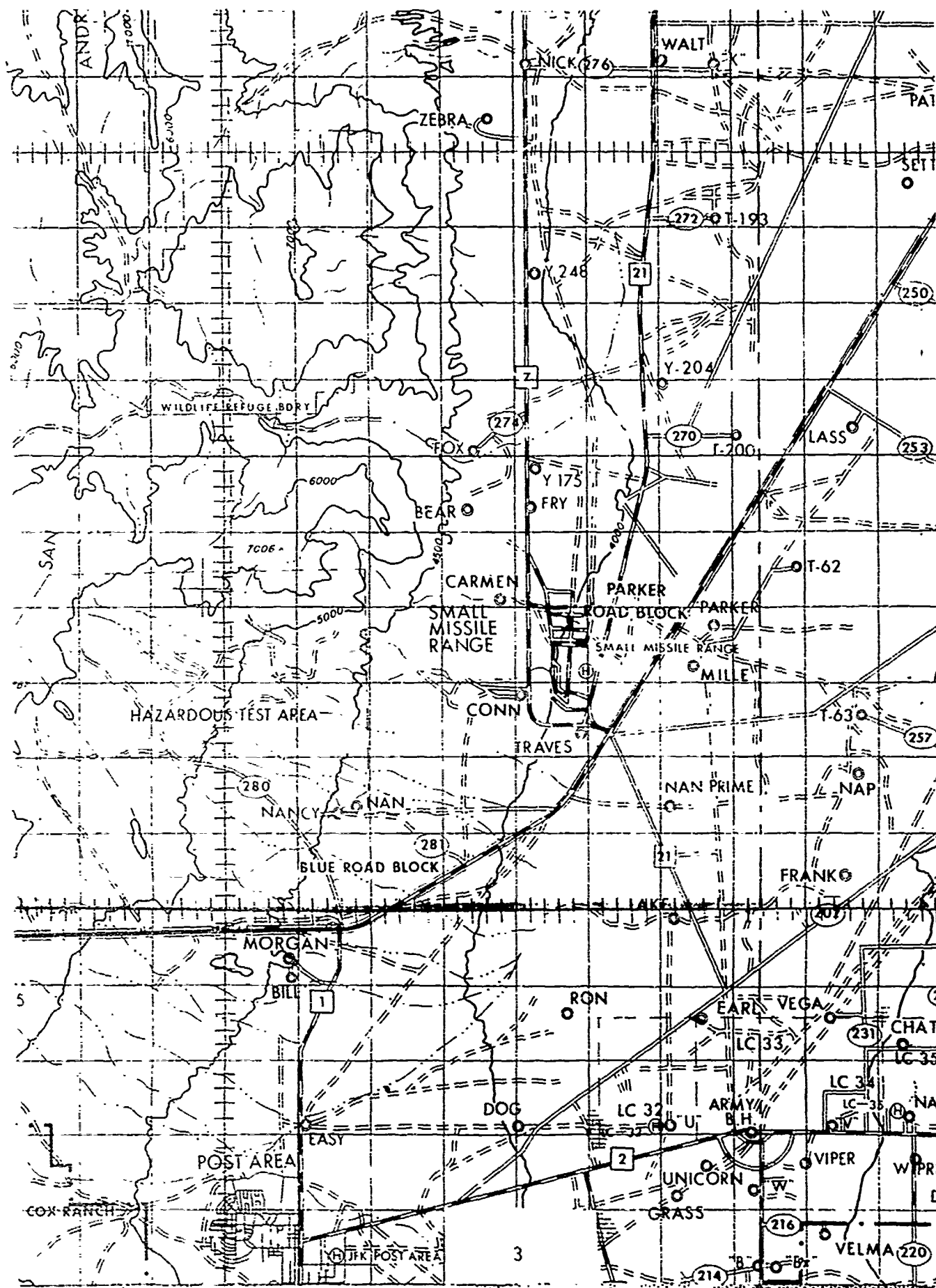


TABLE 1. Surface Observations taken at 0930 MST,
30 October 1979, at LC-33, 19702A GSRS,
Missile Number 212, Round Number B-54.

ELEVATION	3977.30	FT/MSL
PRESSURE	870.6	MBS
TEMPERATURE	8.9	°C
RELATIVE HUMIDITY	61	
DEW POINT	1.7	°C
DENSITY	1070	GM/M ³
WIND SPEED	19	KTS
WIND DIRECTION	310	DEGREES
CLOUD COVER	1	St
CLOUD COVER	6	Sc
CLOUD COVER	1	Ac

TABLE 2

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	293	16	-30	314	12	-30	311	15
-20	308	14	-20	306	15	-20	310	15
-10	321	19	-10	320	12	-10	303	19
0.0	317	13	0.0	318	10	0.0	301	17
+10	307	16	+10	310	10	+10	313	17

TABLE 3

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	318	15	-30	321	18
-20	309	10	-20	301	15
-10	313	09	-10	312	15
0.0	320	11	0.0	308	15
+10	297	13	+10	324	17

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	316	18	-30	310	22
-20	MISG	13	-20	304	17
-10	MISG	15	-10	310	24
0.0	MISG	20	0.0	300	22
+10	MISG	18	+10	309	22

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-33

DATE 30 October 1979

TIME 0920 MST

RELEASE POINT COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XX OR FEET AGL .

[illegible][illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM	LC-33	DATE	30 October 1979	TIME	0930 MST
RELEASE POINT	COORDINATES (WSTM)	X=	486,037.24	Y=	182,350.16
				H=	3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XXX OR FEET AGL .

[illegible][illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 6

RELEASED FROM NICK SITE

DATE 30 October 1979

TIME 0920 MST

RELEASE POINT COORDINATES (WSTM) X= 470,734.56

$$Y = 255,775.64$$

H= 4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XXX OR FEET AGL .

[illegible][illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 7

RELEASED FROM NICK SITE DATE 30 October 1979 TIME 0930 MST

RELEASE POINT COORDINATES (WSTM) X= 470.734.56 Y= 255.775.64 H= 4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XXX OR FEET AGL .

[illegible][illegible][illegible]

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MDT
ASCENSION 140. 509

SIGNIFICANT LEVEL DATA
3030060309
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

TABLE 8

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
869.8	11.2	-2.6	38.0
850.0	7.7	-3.2	46.0
788.6	2.1	-5.1	59.0
700.0	-6.1	-6.8	95.0
644.6	-11.0	-11.1	99.0
633.8	-10.7	-10.3	99.0
627.2	-12.1	-12.2	99.6
585.2	-15.5	-19.1	74.0
577.0	-15.4	-23.0	52.0
569.0	-16.3	-27.6	36.0
560.6	-17.0	-32.3	25.0
536.8	-18.9	-35.7	21.0
500.0	-22.8	-37.7	24.0
403.2	-35.4	-48.0	26.0
400.0	-35.3	-48.2	25.0
389.6	-36.2	-50.5	21.0
348.5	-40.5		
313.0	-37.4		
300.0	-37.4		
278.0	-39.0		
250.0	-41.4		
225.2	-41.6		
207.9	-44.1		
204.6	-43.1		
200.0	-44.1		
188.2	-45.9		
175.2	-44.9		
150.0	-51.0		
122.4	-56.3		
100.0	-59.0		
94.4	-60.3		
88.6	-59.1		
83.0	-62.2		
77.8	-60.3		
70.0	-64.1		
62.4	-65.1		
59.2	-60.3		
50.0	-58.9		
30.0	-56.5		

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

UPPER AIR DATA
3030000309
S M R
TABLE 9

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS NST
ASCENSION NO. 369

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (IN)	SPEED KNOTS	
3997.3	809.8	11.2	38.0	1063.3	657.7	300.0	9.9	1.000261
4000.0	809.7	11.2	38.0	1063.2	657.6	300.0	9.9	1.000261
4500.0	853.9	8.4	44.4	1054.3	654.4	305.5	11.9	1.000258
5000.0	838.2	6.7	48.4	1041.3	652.4	309.4	14.0	1.000255
5500.0	822.7	5.3	51.7	1027.2	650.7	312.3	16.1	1.000251
6000.0	807.5	3.9	54.9	1013.4	649.1	315.5	17.2	1.000248
6500.0	792.6	2.5	58.1	999.7	647.4	323.3	14.7	1.000244
7000.0	777.6	1.1	63.2	989.7	645.9	322.9	12.8	1.000241
7500.0	762.9	-0.2	69.0	971.6	644.3	342.2	11.8	1.000238
8000.0	748.5	-1.5	74.8	957.8	642.8	347.4	11.7	1.000234
8500.0	734.3	-2.8	80.6	944.3	641.2	359.6	13.5	1.000231
9000.0	720.4	-4.1	86.3	930.9	639.6	334.2	15.3	1.000228
9500.0	706.7	-5.4	92.1	917.8	638.1	331.1	16.3	1.000224
10000.0	693.2	-6.7	95.5	904.5	636.6	328.3	17.3	1.000220
10500.0	679.7	-7.8	96.4	890.9	635.1	327.1	17.7	1.000216
11000.0	666.5	-9.0	97.4	877.6	633.7	326.0	18.0	1.000212
11500.0	653.6	-10.2	98.3	864.4	632.3	322.2	17.6	1.000208
12000.0	640.9	-10.9	99.0	849.9	631.4	316.8	17.1	1.000204
12500.0	628.3	-11.9	99.0	836.7	630.1	308.4	17.1	1.000200
13000.0	615.9	-13.0	92.4	823.6	628.5	298.0	17.7	1.000195
13500.0	603.7	-14.0	85.2	810.5	627.5	298.2	20.7	1.000191
14000.0	591.7	-15.0	78.0	797.6	626.3	300.1	23.6	1.000186
14500.0	580.0	-15.4	60.0	783.4	625.6	307.5	25.1	1.000181
15000.0	568.4	-16.4	35.2	770.8	624.4	314.9	24.6	1.000175
15500.0	557.0	-17.3	24.4	758.2	623.2	320.9	24.3	1.000171
16000.0	545.8	-18.2	22.5	745.5	622.1	322.0	25.2	1.000168
16500.0	534.8	-19.1	21.2	733.2	621.0	323.1	26.1	1.000165
17000.0	523.9	-20.2	22.0	721.4	619.6	322.3	27.0	1.000162
17500.0	513.2	-21.4	22.9	709.9	618.2	320.6	27.7	1.000160
18000.0	502.7	-22.5	23.8	698.6	616.8	317.4	28.2	1.000157
18500.0	492.3	-23.7	24.1	687.4	615.3	314.4	29.4	1.000154
19000.0	481.9	-25.0	24.3	676.3	613.8	311.7	32.6	1.000152
19500.0	471.8	-26.2	24.5	665.4	612.2	309.6	35.7	1.000149
20000.0	461.9	-27.4	24.7	654.7	610.7	309.2	38.3	1.000147
20500.0	452.1	-28.7	24.9	644.2	609.1	308.9	40.9	1.000144
21000.0	442.6	-29.9	25.1	633.9	607.6	308.7	41.3	1.000142
21500.0	433.3	-31.2	25.3	623.8	606.0	308.6	41.0	1.000140
22000.0	424.2	-32.4	25.5	613.8	604.5	308.5	39.9	1.000137
22500.0	415.3	-33.7	25.7	604.0	602.9	308.6	38.0	1.000135
23000.0	406.5	-34.9	25.9	594.4	601.3	308.4	36.5	1.000133

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79
ASCENSION NO. 369

UPPER AIR DATA
3030000309
S M R

GEODETTIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
23500.0	397.8	-35.5	-48.7	24.2	583.1	600.6	308.0	35.5	1.000131
24000.0	389.2	-36.2	-50.6	20.8**	572.3	595.7	307.0	35.2	1.000128
24500.0	380.7	-37.1	-53.2	16.7**	561.8	590.8	307.4	36.5	1.000125
25000.0	372.4	-37.9	-56.3	12.5**	551.5	587.5	307.7	38.4	1.000123
25500.0	364.3	-38.8	-60.1	8.3**	541.5	585.4	309.0	41.7	1.000121
26000.0	356.3	-39.6	-65.9	4.2**	531.8	583.3	310.6	45.2	1.000118
26500.0	348.5	-40.5	-102.0	.0**	521.9	584.2	313.5	48.9	1.000116
27000.0	340.9	-39.9			509.0	585.0	316.0	52.7	1.000113
27500.0	333.4	-39.2			496.5	585.8	316.7	53.1	1.000111
28000.0	326.1	-38.6			484.3	586.7	317.2	53.1	1.000108
28500.0	319.0	-37.9			472.4	587.5	314.3	47.8	1.000105
29000.0	312.0	-37.4			461.0	588.2	310.8	43.5	1.000103
29500.0	305.2	-37.4			451.0	588.2	307.7	43.5	1.000100
30000.0	298.6	-37.5			441.4	590.0	305.0	44.1	1.000098
30500.0	292.0	-38.2			433.0	597.2	305.7	47.5	1.000096
31000.0	285.6	-38.8			424.6	596.4	306.2	50.8	1.000095
31500.0	279.4	-39.5			416.5	595.6	305.6	50.7	1.000093
32000.0	273.3	-39.9			408.1	595.0	305.1	50.5	1.000091
32500.0	267.2	-40.3			399.8	594.5	302.8	50.3	1.000089
33000.0	261.3	-40.6			391.6	594.0	300.3	50.2	1.000087
33500.0	255.6	-41.0			383.8	593.5	298.4	50.0	1.000085
34000.0	250.0	-41.4			375.7	593.1	296.7	49.7	1.000084
34500.0	244.4	-41.4			367.5	593.0	295.1	49.0	1.000082
35000.0	239.0	-41.5			359.4	593.0	293.4	48.1	1.000080
35500.0	233.7	-41.5			351.5	592.9	288.2	48.9	1.000078
36000.0	228.6	-41.6			343.8	592.8	281.7	50.9	1.000077
36500.0	223.5	-41.8			336.6	592.5	278.3	56.2	1.000075
37000.0	218.5	-42.5			330.1	591.6	276.3	62.5	1.000074
37500.0	213.7	-43.2			323.7	590.7	277.1	66.8	1.000072
38000.0	208.9	-43.9			317.5	589.8	278.5	70.5	1.000071
38500.0	204.2	-43.2			309.4	590.8	281.3	68.9	1.000069
39000.0	199.7	-44.1			303.8	589.5	284.9	65.9	1.000068
39500.0	195.2	-44.8			297.8	588.7	285.5	61.1	1.000066
40000.0	190.8	-45.5			292.0	587.8	285.1	55.7	1.000065
40500.0	186.5	-45.8			285.8	587.4	279.9	51.0	1.000064
41000.0	182.3	-45.5			279.0	587.9	272.7	47.1	1.000062
41500.0	178.2	-45.1			272.3	588.3	269.3	43.5	1.000061
42000.0	174.2	-45.1			266.2	588.3	266.1	39.9	1.000059
42500.0	170.3	-46.0			261.1	587.1	265.8	38.3	1.000058
43000.0	166.4	-46.9			256.2	586.0	265.5	37.0	1.000057

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA
3030000309
S M R

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 369

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4300.0	162.6	-47.8		251.4	524.8	207.3	37.3	1.000056
4400.0	158.9	-48.7		248.7	523.0	268.8	38.1	1.000055
4450.0	155.3	-49.6		242.0	522.4	269.0	40.8	1.000054
4500.0	151.8	-50.5		237.5	521.3	270.0	43.0	1.000053
4550.0	148.3	-51.3		232.8	520.3	272.4	44.6	1.000052
4600.0	144.8	-51.9		228.0	519.5	276.2	44.2	1.000051
4650.0	141.4	-52.5		223.3	518.7	281.2	42.7	1.000050
4700.0	138.1	-53.1		218.7	517.8	281.7	39.4	1.000049
4750.0	134.9	-53.8		214.2	517.0	281.7	35.8	1.000048
4800.0	131.8	-54.4		209.8	516.2	274.1	32.0	1.000047
4850.0	128.7	-55.0		205.5	515.4	282.7	29.2	1.000046
4900.0	125.7	-55.6		201.3	514.6	285.3	29.6	1.000045
4950.0	122.8	-56.2		197.2	513.8	281.5	31.6	1.000044
5000.0	119.9	-56.6		192.8	513.3	280.6	33.6	1.000043
5050.0	117.0	-56.9		188.5	512.9	282.9	35.4	1.000042
5100.0	114.2	-57.2		184.3	512.5	284.0	36.6	1.000041
5150.0	111.5	-57.5		180.2	512.0	285.1	35.5	1.000040
5200.0	108.9	-57.9		176.2	511.6	285.8	34.5	1.000039
5250.0	106.3	-58.2		172.3	511.2	285.4	36.0	1.000038
5300.0	103.8	-58.5		168.4	510.8	285.3	37.6	1.000037
5350.0	101.3	-58.8		164.7	510.3	284.2	37.3	1.000036
5400.0	98.9	-59.2		161.1	509.8	282.0	36.7	1.000035
5450.0	96.5	-59.6		157.6	509.0	281.0	33.7	1.000034
5500.0	94.2	-60.3		154.2	508.4	280.3	28.4	1.000033
5550.0	92.0	-60.9		150.2	509.0	280.5	24.0	1.000033
5600.0	89.8	-61.3		146.3	509.6	282.5	22.8	1.000033
5650.0	87.6	-61.9		143.0	509.3	285.8	21.7	1.000032
5700.0	85.5	-62.8		140.3	507.7	289.3	19.7	1.000031
5750.0	83.5	-63.9		137.6	506.2	293.7	17.4	1.000030
5800.0	81.4	-64.6		134.1	505.5	299.0	14.9	1.000030
5850.0	79.5	-65.3		130.5	507.5	276.4	10.4	1.000029
5900.0	77.6	-66.0		127.0	508.2	293.9	6.3	1.000028
5950.0	75.7	-66.3		124.5	507.0	326.8	4.9	1.000028
6000.0	73.9	-67.2		121.9	505.9	352.9	5.8	1.000027
6050.0	72.1	-68.1		119.5	504.7	9.6	7.5	1.000027
6100.0	70.3	-68.9		117.1	503.5	26.4	6.9	1.000026
6150.0	68.6	-69.3		114.4	503.0	48.8	6.4	1.000025
6200.0	66.9	-69.5		111.7	502.7	71.4	6.8	1.000025
6250.0	65.3	-69.7		109.1	502.5	104.0	6.5	1.000024
6300.0	63.7	-69.9		106.5	502.2	151.0	8.1	1.000024

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

UPPER AIR DATA
3030000369
S M R

TABLE 9 (CONT)

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79
0930 HRS MST
ASCENSION NO. 369

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DLORES(1N)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.1	-64.7		103.8	562.5	147.9	9.7	1.000023
64000.0	60.6	-62.5		100.2	565.5	162.2	10.5	1.000022
64500.0	59.2	-60.3		96.8	568.4	173.7	12.0	1.000022
65000.0	57.7	-60.1		94.4	568.6	189.2	12.2	1.000021
65500.0	56.4	-59.9		92.1	568.9	204.0	13.1	1.000021
66000.0	55.0	-59.7		89.8	569.2	219.4	14.0	1.000020
66500.0	53.7	-59.5		87.5	569.5	239.5	14.7	1.000019
67000.0	52.4	-59.3		85.4	569.7	255.9	16.9	1.000019
67500.0	51.2	-59.1		83.3	570.0	265.4	15.5	1.000019
68000.0	49.9	-58.9		81.2	570.2	276.7	13.1	1.000018
68500.0	48.8	-58.3		79.2	570.4	290.8	11.1	1.000018
69000.0	47.6	-56.7		77.3	570.5	297.1	5.5	1.000017
69500.0	46.5	-58.6		75.4	570.7	25.1	1.2	1.000017
70000.0	45.4	-58.4		73.6	570.8	107.0	4.3	1.000016
70500.0	44.3	-58.3		71.8	571.0	137.4	7.0	1.000016
71000.0	43.2	-58.2		70.1	571.1	149.4	10.5	1.000016
71500.0	42.2	-58.1		68.4	571.3	168.0	11.9	1.000015
72000.0	41.2	-58.0		66.7	571.4	189.2	13.6	1.000015
72500.0	40.2	-57.9		65.1	571.6	204.0	16.8	1.000014
73000.0	39.3	-57.8		63.6	571.7	214.8	16.3	1.000014
73500.0	38.4	-57.7		62.0	571.9	226.4	15.8	1.000013
74000.0	37.5	-57.5		60.5	572.0	238.2	16.1	1.000013
74500.0	36.6	-57.4		59.1	572.2	248.5	14.5	1.000013
75000.0	35.7	-57.3		57.6	572.3	260.9	13.4	1.000013
75500.0	34.9	-57.2		56.2	572.5	274.8	12.9	1.000013
76000.0	34.0	-57.1		54.9	572.6	277.9	13.2	1.000012
76500.0	33.2	-57.0		53.5	572.8	280.4	13.6	1.000012
77000.0	32.4	-56.9		52.2	572.9	262.8	14.0	1.000012
77500.0	31.7	-56.8		51.0	573.1			1.000011
78000.0	30.9	-56.6		49.7	573.2			1.000011
78500.0	30.2	-56.5		48.5	573.4			1.000011

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

UPPER AIR DATA
3030000569
S M R

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS NST
ASCENSION NO. 369

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
43500.0	162.6	-47.8		251.4	584.8	207.3	37.3	1.000056
44000.0	159.9	-48.7		248.7	583.0	208.8	38.1	1.000055
44500.0	155.3	-49.6		242.0	582.4	209.0	40.8	1.000054
45000.0	151.8	-50.5		237.5	581.3	210.0	43.0	1.000053
45500.0	148.3	-51.3		232.8	580.3	212.4	44.6	1.000052
46000.0	144.8	-51.9		228.0	579.5	216.2	44.2	1.000051
46500.0	141.4	-52.5		223.3	578.7	221.2	42.7	1.000050
47000.0	138.1	-53.1		218.7	577.8	221.7	39.4	1.000049
47500.0	134.9	-53.8		214.2	577.0	221.7	35.8	1.000048
48000.0	131.8	-54.4		209.8	576.2	224.1	32.0	1.000047
48500.0	128.7	-55.0		205.5	575.4	227.7	29.2	1.000046
49000.0	125.7	-55.6		201.3	574.6	225.3	29.6	1.000045
49500.0	122.8	-56.2		197.2	573.8	221.5	31.6	1.000044
50000.0	119.9	-56.6		192.8	573.3	220.6	33.6	1.000043
50500.0	117.0	-56.9		188.5	572.9	222.9	35.4	1.000042
51000.0	114.2	-57.2		184.3	572.5	224.0	36.6	1.000041
51500.0	111.5	-57.5		180.2	572.0	225.1	35.5	1.000040
52000.0	108.9	-57.9		176.2	571.6	225.0	34.5	1.000039
52500.0	106.3	-58.2		172.3	571.2	225.4	36.0	1.000038
53000.0	103.8	-58.5		168.4	570.8	225.3	37.6	1.000038
53500.0	101.3	-58.8		164.7	570.3	224.2	37.3	1.000037
54000.0	98.9	-59.2		161.1	569.8	222.0	36.7	1.000036
54500.0	96.5	-59.6		157.6	569.0	221.0	33.7	1.000035
55000.0	94.2	-60.3		154.2	568.4	220.3	28.4	1.000034
55500.0	92.0	-59.8		150.2	569.0	249.5	24.0	1.000033
56000.0	89.8	-59.3		146.3	569.6	222.5	22.8	1.000033
56500.0	87.6	-59.6		143.0	569.3	225.8	21.7	1.000032
57000.0	85.5	-60.8		140.3	567.7	229.2	19.7	1.000031
57500.0	83.5	-61.9		137.6	566.2	223.7	17.4	1.000031
58000.0	81.4	-61.6		134.1	566.6	209.0	14.9	1.000030
58500.0	79.5	-60.9		130.5	567.5	276.4	10.4	1.000029
59000.0	77.6	-60.4		127.0	568.2	293.9	6.3	1.000028
59500.0	75.7	-61.3		124.5	567.0	326.8	4.9	1.000028
60000.0	73.9	-62.2		121.9	565.9	322.9	5.8	1.000027
60500.0	72.1	-63.1		119.5	564.7	9.6	7.5	1.000027
61000.0	70.3	-63.9		117.1	563.5	26.4	6.9	1.000026
61500.0	68.6	-64.3		114.4	563.0	48.8	6.4	1.000025
62000.0	66.9	-64.5		111.7	562.7	71.4	6.8	1.000025
62500.0	65.3	-64.7		109.1	562.5	104.0	6.5	1.000024
63000.0	63.7	-64.9		106.5	562.2	151.0	8.1	1.000024

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LONG DEG

UPPER AIR DATA
303000Z0309
S M R
TABLE 9 (CONT)

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 369

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/S	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.1	-64.7		103.8	512.5	147.9	9.7	1.000023
64000.0	60.6	-62.5		100.2	505.5	152.2	10.5	1.000022
64500.0	59.2	-60.3		96.8	508.4	173.7	12.0	1.000022
65000.0	57.7	-60.1		94.4	508.6	189.2	12.2	1.000021
65500.0	56.4	-59.9		92.1	508.9	204.0	13.1	1.000021
66000.0	55.0	-59.7		89.8	509.2	219.4	14.0	1.000020
66500.0	53.7	-59.5		87.5	509.5	239.5	14.7	1.000019
67000.0	52.4	-59.3		85.4	509.7	255.9	16.9	1.000019
67500.0	51.2	-59.1		83.3	570.0	265.4	15.5	1.000019
68000.0	49.9	-58.9		81.2	570.2	276.7	13.1	1.000018
68500.0	48.8	-58.8		79.2	570.4	290.8	11.1	1.000018
69000.0	47.6	-58.7		77.3	570.5	297.1	5.5	1.000017
69500.0	46.5	-58.6		75.4	570.7	25.1	1.2	1.000017
70000.0	45.4	-58.4		73.6	570.8	107.0	4.3	1.000016
70500.0	44.3	-58.3		71.8	571.0	137.4	7.0	1.000016
71000.0	43.2	-58.2		70.1	571.1	149.4	10.5	1.000016
71500.0	42.2	-58.1		68.4	571.3	168.0	11.9	1.000015
72000.0	41.2	-58.0		66.7	571.4	189.2	13.6	1.000015
72500.0	40.2	-57.9		65.1	571.6	204.0	16.8	1.000014
73000.0	39.3	-57.8		63.6	571.7	214.8	16.3	1.000014
73500.0	38.4	-57.7		62.0	571.9	226.4	15.8	1.000014
74000.0	37.5	-57.5		60.5	572.0	238.2	16.1	1.000013
74500.0	36.6	-57.4		59.1	572.2	248.5	14.5	1.000013
75000.0	35.7	-57.3		57.6	572.3	260.9	13.4	1.000013
75500.0	34.9	-57.2		56.2	572.5	274.8	12.9	1.000013
76000.0	34.0	-57.1		54.9	572.6	277.9	13.2	1.000012
76500.0	33.2	-57.0		53.5	572.8	280.4	13.6	1.000012
77000.0	32.4	-56.9		52.2	572.9	282.8	14.0	1.000012
77500.0	31.7	-56.8		51.0	573.1			1.000011
78000.0	30.9	-56.6		49.7	573.2			1.000011
78500.0	30.2	-56.5		48.5	573.4			1.000011

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79
ASCENSION NO. 369

MANOATORY LEVELS
3030060369
S M R
TABLE 10

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEW POINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4621.	7.7	-3.2	46.	306.0	12.4
800.0	6240.	5.2	-4.0	57.	319.1	15.9
750.0	7951.	-1.4	-5.3	74.	348.2	11.6
700.0	9741.	-6.1	-6.0	95.	329.7	18.8
650.0	11630.	-10.5	-10.7	99.	320.7	17.5
600.0	13040.	-14.3	-16.5	85.	298.4	21.6
550.0	15791.	-17.8	-33.0	25.	322.1	24.8
500.0	18109.	-22.0	-37.7	24.	318.7	28.3
450.0	20612.	-29.0	-42.7	25.	308.0	41.5
400.0	23338.	-35.3	-48.2	25.	308.1	35.7
350.0	26358.	-40.3	-77.4	1.**	312.9	48.1
300.0	29633.	-37.4			305.3	43.6
250.0	33924.	-41.4			298.8	49.7
200.0	38674.	-44.1			264.5	60.2
175.0	41798.	-44.9			260.9	40.7
150.0	45134.	-51.0			271.1	43.8
125.0	48985.	-55.8			254.5	30.0
100.0	53609.	-59.0			253.5	37.0
75.0	58174.	-61.1			273.4	11.8
50.0	63905.	-64.1			29.0	6.8
25.0	69719.	-61.5			166.5	11.0
0.0	72325.	-58.9			275.1	13.4
30.0	78295.	-57.9			205.7	17.1
		-56.5				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.